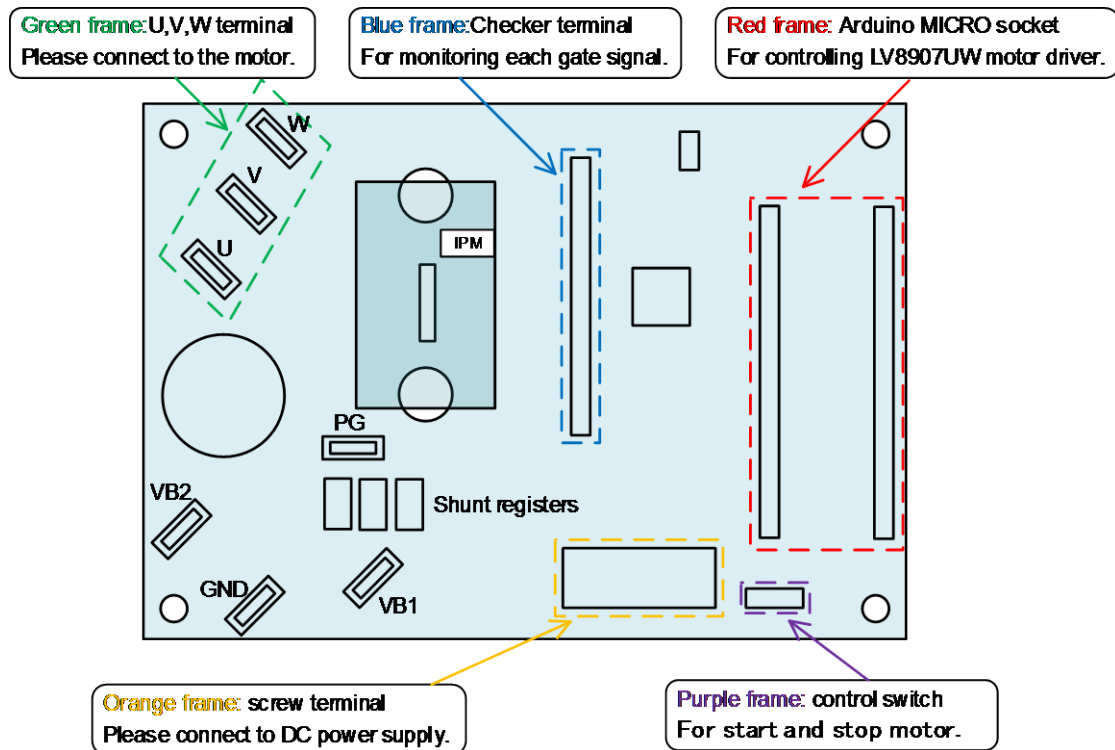


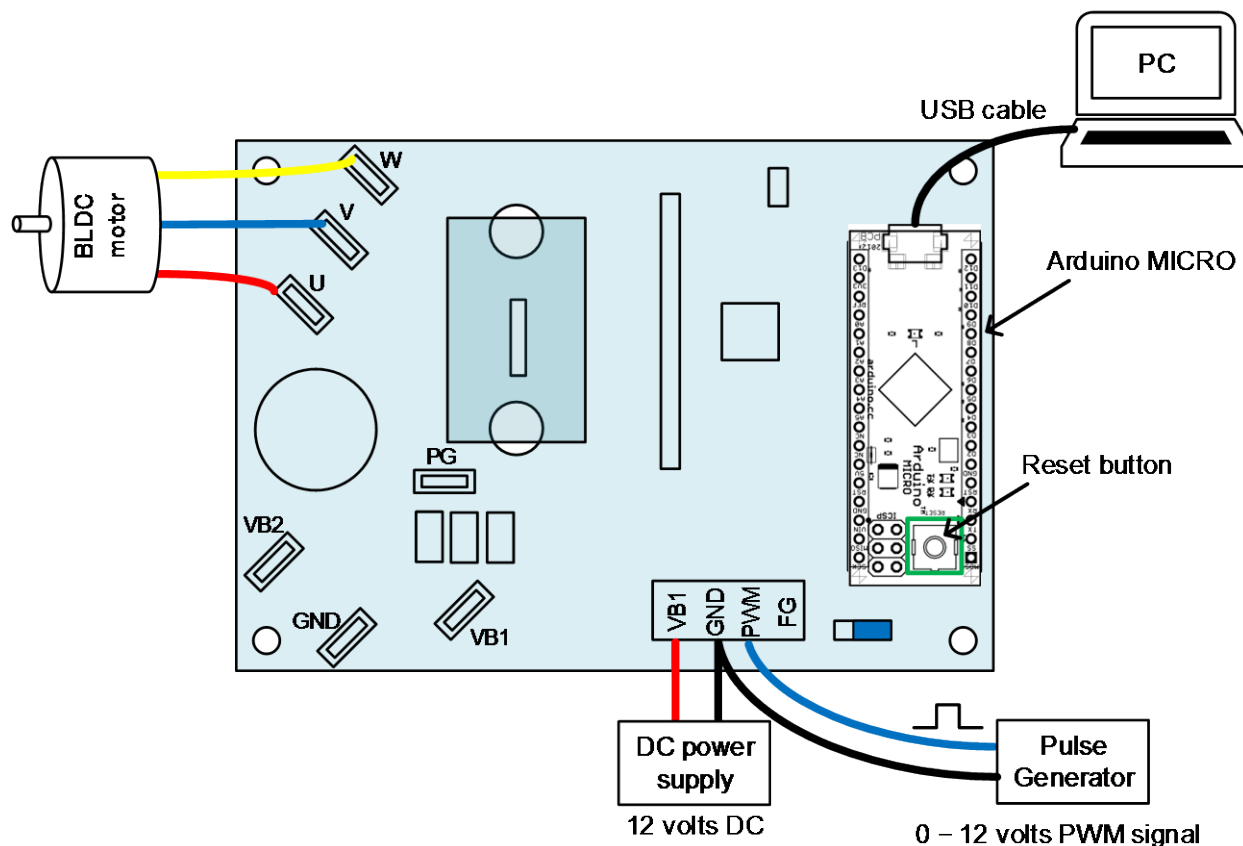
## Test Procedure for the STK984-190-EGEVB Evaluation Board

### Description of each pin



## Test procedure

Check operation and zap OTP of LV8907UW.



**Step 1:** Install Arduino MICRO on the socket and connect PC via USB cable.

Note; Arduino MICRO must be installed LV8907UWEVK firmware.

**Step 2:** Connect a power supply and pulse generator to J1.

**Step 3:** Connect a motor to U, V and W TAB terminal.

**Step 4:** Put short socket at MC side of J4.

**Step 5:** Turn on the power supply and supply 12 volts.

**Step 6:** Turn on the pulse generator and supply PWM signal. (Recommended duty ratio is 50%)

(PWM signal requirement - amplitude: 0 -12 volts, frequency range: 5.3-1000Hz, duty ratio; 15 - 85%)

**Step 7:** Push reset button on Arduino MICRO.

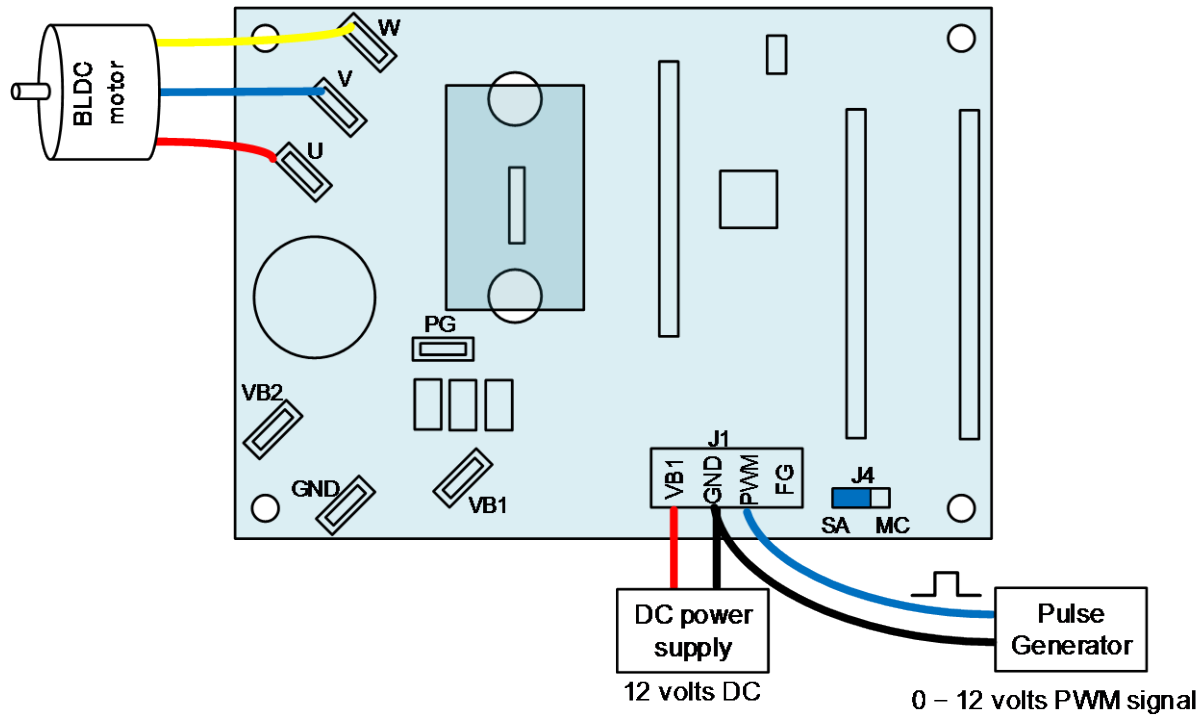
**Step 8:** Boot up LV8907UW GUI. Click "Connect" button then "Run" button.

**Step 9:** Go to "OTP Map" tab menu. Click "Import" to read OTP data and click "Write" to zap LV8907UW OTP.

**Step 10:** Click Disconnect SPI then motor spin off.

## Test procedure (continued)

Check operation stand-alone.



**Step 11:** Change short socket at SA side of J4. Then spin up the motor again.

**Step 12:** Turn off the power supply then remove Arduino MICRO.

**Step 13:** Remove Arduino MICRO from the socket.

**Step 14:** Turn on the power supply and supply 12 volts again.

**Step 15:** Spin up the motor again. STK984-190-EGEVB work correctly. Test complete.

## Test procedure (continued)

### LV8907UW GUI window

Intelligent Motor Driver Evaluation GUI by ON Semiconductor Ver. 0.2.0.1

LV8907

Speed [RPM]  
Current [A]  
VCC [V]  
VS [V]  
Thermistor [V]

10:50:31.42 10:50:34.72 10:50:38.02 10:50:41.32

100 ms Speed: auto RF: auto

Parameters Start-up System PWM Translation Target speed PI Inverter Fault Register Map **OTP Map**

Name	7	6	5	4	3	2	1	0
0x40 ORCONF0	FRMD2	FRREN2	SCEN2	PWMF2	REGSEL2	VCEN2	LINSLP2	LINID2
0x41 ORCONF1	FLSEL2		ZPSEL2	PWMFL2	PWMZP2	POTC2	PWMON2	
0x42 ORCONF2	SSTEN2	FGOF2			FDTI2			
0x43 ORCONF3	POTSEL2				SST2			
0x44 ORCONF4				STOSC2				
0x45 ORCONF5		CLMASK2				OCMASK2		
0x46 ORCONF6		SROFF2				CRMASK2		
0x47 ORCONF7	SYNEN2	PPDOSEL2	FSCDT2			FSCDL2		
0x48 ORCONF8	SSCG2		CPTM2			THTH2	TST2	
0x49 ORCONF9	WDTEN2	WDTP2			WDT2			
0x4A ORCONF10	VCLVPEN2	CPEN2	THWEN2	THPEN2	FSPEN2	OVPEN2	OCPEN2	DIAGSEL2
0x4B ORCONF11	DWNSET2	WDTSEL2			CPLT2	FSPLT2	OCPLT2	DLTO2
0x4C ORCONF12		STEPSSEL2		SLMD2		LASET2		
0x50 ORSPCT0	ORSPTCT07		FX2		ORSPTCT03		PG2	
0x51 ORSPCT1	ORSPTCT17		IX2		ORSPTCT13		IG2	
0x52 ORSPCT2	BRK0_2				FGT0_2			
0x53 ORSPCT3	BRK1_2				FGT1_2			
0x54 ORSPCT4	BRK2_2				FGT2_2			

2016/06/15 10:51:27 Register ['0x60', 'MRACS'], value: 0  
2016/06/15 10:51:27 Register ['0x60', 'RBSL\_2'], value: 0  
2016/06/15 10:51:38 Set Spi state command has been sent

Connect button  
Run button  
OTP Map TAB  
Import button  
Write button

### LV8907UW OTP data example

Address,Data --- Created: 2016-06-14 13:44, STK984-190-E EVB OTP

0x00,0x2C  
0x01,0xC8  
0x02,0xB1  
0x03,0x1B  
0x04,0x50  
0x05,0x00  
0x06,0x00  
0x07,0x58  
0x08,0x00  
0x09,0x3E  
0x0A,0x00  
0x0B,0x06  
0x0C,0x00  
0x0D,0x20  
0x0E,0x14  
0x0F,0x0B  
0x10,0x14  
0x11,0x1F  
0x12,0x2A  
0x13,0x35  
0x14,0x40  
0x15,0x4B  
0x16,0x56  
0x17,0x5F  
0x18,0x00  
0x19,0x55  
0x1A,0x00  
0x1B,0x00  
0x1C,0x00  
0x1D,0x00  
0x1E,0x00  
0x1F,0x00  
0x20,0x00  
0x21,0x00  
0x22,0x00  
0x23,0x00  
0x24,0x00  
0x25,0x04

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